

NYE-DT 16



8 September 2016
Americas/United States
Equity Research
Oil & Gas Exploration & Production

Apache Corp. (APA)

COMPANY UPDATE

Rating	NEUTRAL
Price (08-Sep-16, US\$)	58.99
Target price (US\$)	67.00
52-week price range	58.99 - 34.38
Market cap (US\$ m)	23,322.50
Enterprise value (US\$ m)	30,971.13

*Stock ratings are relative to the coverage universe in each analyst's or each team's respective sector.

*Target price is for 12 months.

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Alpine High Has Potential To Be A World Class Resource

- **Bottom Line:** With limited well results from APA in the Alpine High, and due to the ongoing delineation process skepticism is natural. However the key data released yesterday deserve another report. The key point inside is that the low clay content and excellent porosity is why the rocks are so productive in a lower pressure and hence lower cost environment - which in turn is why the economics look so compelling. We ran the lower pressure type curve yesterday in our model with a more conservative cost per well to derive our \$4/sh uplift (Figure 2). Running average well costs and EUR's of the low and high pressure type curve (which is fully loaded) there would be a further uplift of \$9/sh (Figure 3). Running a longer rig program to fully develop this large resource, downspacing, play optimization or providing credit to the oilier Wolfcamp and Bone Spring would be sources of further upside. It is worth engaging with APA to understand why this could prove to be a truly world class resource.
- **Next Steps:** You can bet we and investors will be monitoring all well performance very closely. APA is drilling the deeper Woodford/Barnett to hold acreage. We focus on the size of the first infrastructure announcements. Over time the oilier potential of the shallower zones should also be tested and data will emerge. As oil recovers, we reiterate our view that the improved inventory depth may allow portfolio actions elsewhere, which would also reduce debt.

Share price performance



On 08-Sep-2016 the S&P 500 INDEX closed at 2179.7
Daily Sep09, 2015 - Sep08, 2016, 09/09/15 = US\$41.29

Quarterly EPS	Q1	Q2	Q3	Q4
2015A	-0.37	0.22	-0.06	-0.06
2016E	-0.40	-0.26	0.00	-0.15
2017E	-0.19	0.21	0.52	0.61

Financial and valuation metrics

Year	12/15A	12/16E	12/17E	12/18E
Revenue (US\$ m)	6,554.0	5,089.9	6,359.4	8,018.3
EBIDAX (US\$ m)	8,915.0	2,944.4	3,719.9	4,784.5
EPS (CS adj.) (US\$)	-0.27	-0.82	1.15	2.96
Prev. EPS (US\$)	-	-	-	-
ROIC (%)	-90.4	-3.2	5.3	9.0
P/E (x)	-218.5	-72.3	51.2	19.9
P/E rel. (%)	n.m	-353.2	275.4	117.3
OCFPS (US\$)	7.50	5.79	8.25	11.17
P/OCF (x)	5.9	10.2	7.1	5.3
Qtrly ent. val./ tot. EBIDAX	3.4	10.4	8.2	6.4
Net debt (US\$ m)	7,310	7,649	7,938	8,033
Dividend (current, US\$)	1.0	Dividend yield (%)	1.7	
Net debt (current, US\$)	7,496.9	Net debt/tot eq (Next Qtr., %)	85.9	
BV/share (Next Qtr., US\$)	18.9	GIC (12/16E, US\$ m)	16,260.4	
EV qtr/GIC (x)	2.1	Current WACC (%)	-	
Free float (%)	91.7	Number of shares (m)	395.36	

Source: Company data, Thomson Reuters, Credit Suisse estimates

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Good Porosity, Low Clay Content Drives Valuation

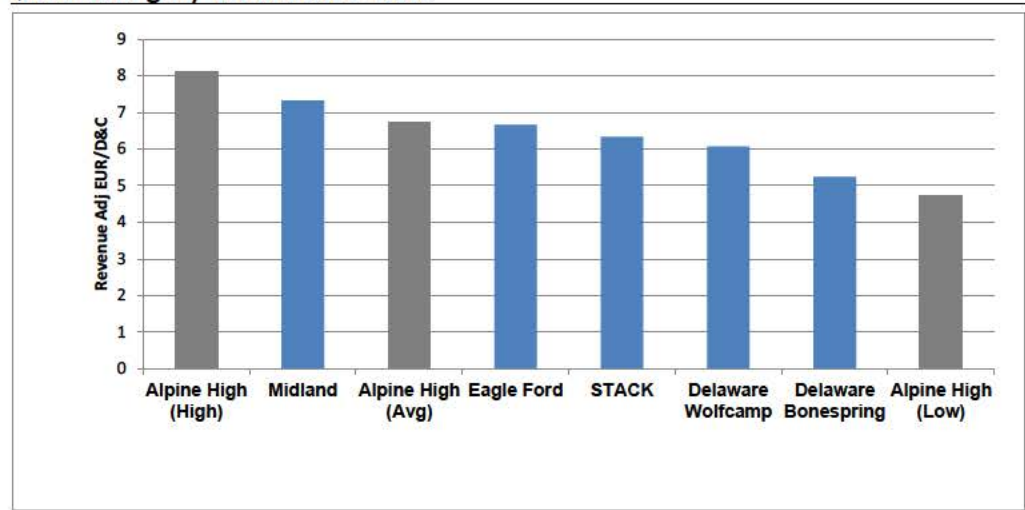
What makes this play exciting?

- The low clay content which improves well performance at lower reservoir pressures and means much lower well costs than say the liquid rich SCOOP/STACK
- The oil and NGL content of the wet gas
- The reservoir porosity which also helps support the flow
- The log consistency over a large portion of the play.
- The large column of charged hydrocarbon source rock

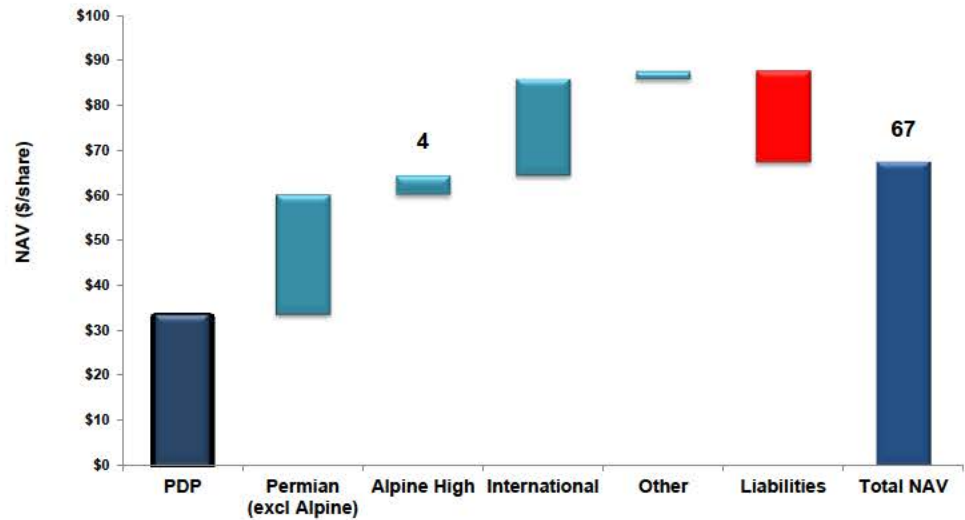
This was shown in the charts yesterday but is worth repeating - see the following charts.

Yes there are a host of micro questions from investors and that are not answered yet - see the end of the report - but APA have put \$900m of capital at the bottom of the cycle to work, i.e. their money is where their mouth is and clearly believes this is world class. Time will tell.

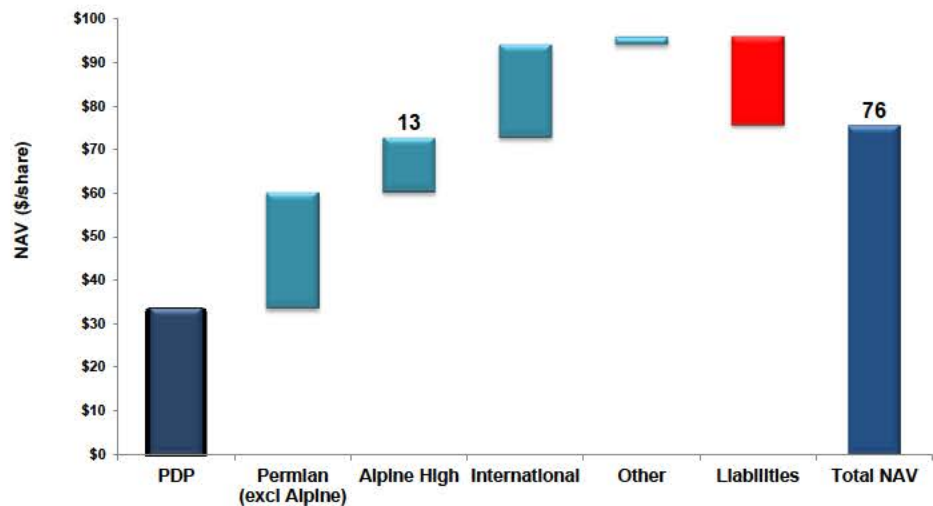
Figure 1: A Quick Proxy To Compare Plays: The Ratio of Revenue (\$60/bbl oil, \$3/mmbtu gas) versus D&C Cost.



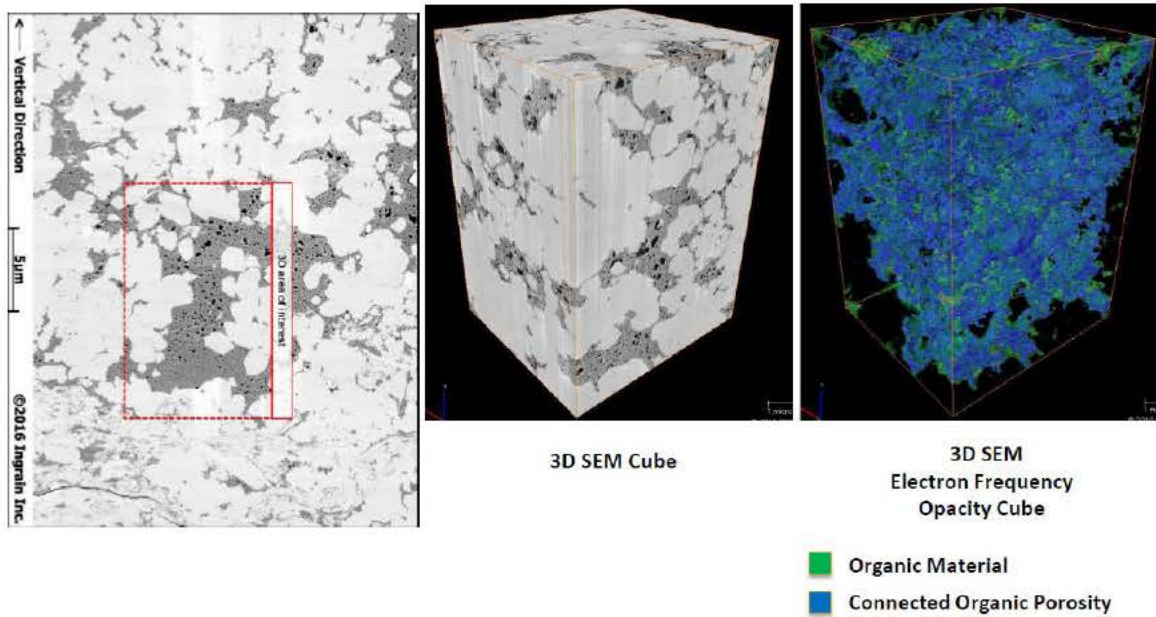
Source: Company data, Credit Suisse estimates

Figure 2: Current NAV/sh, assuming Low end of the range of Type Curves for Alpine High

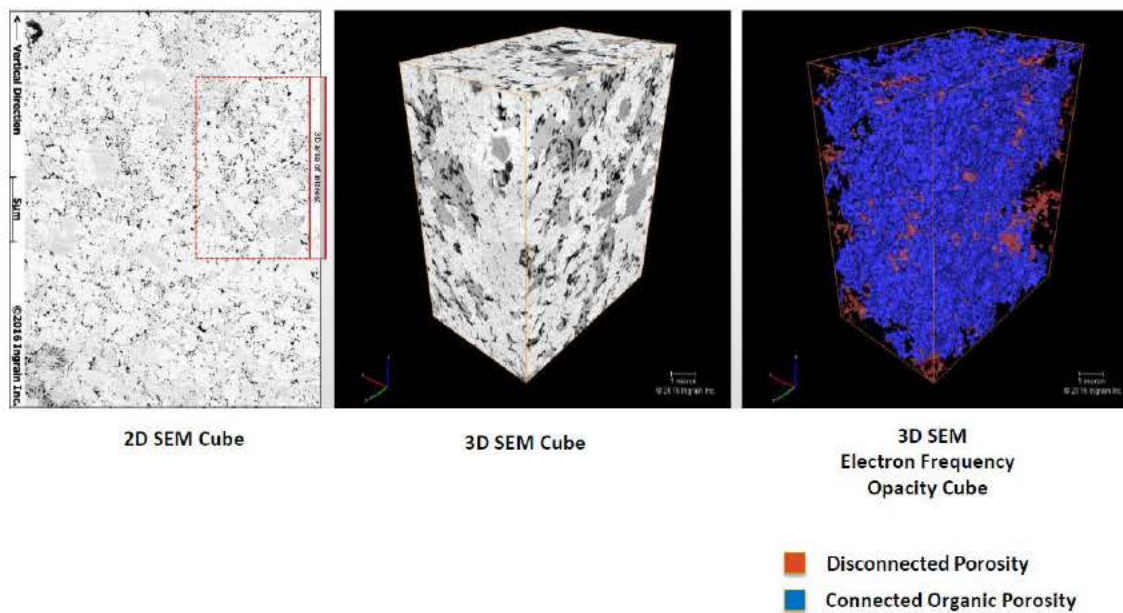
Source: Company data, Credit Suisse estimates

Figure 3: NAV/sh assuming average of Low and High range of Type Curves for Alpine High

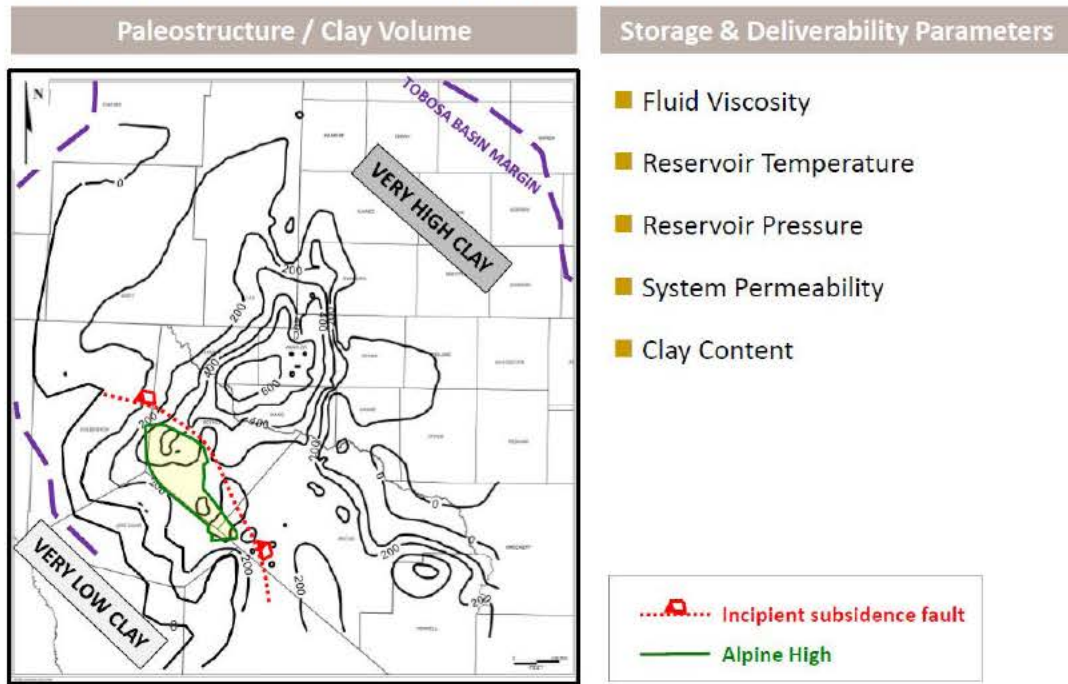
Source: Company data, Credit Suisse estimates

Figure 4: Good Rock Quality in Woodford

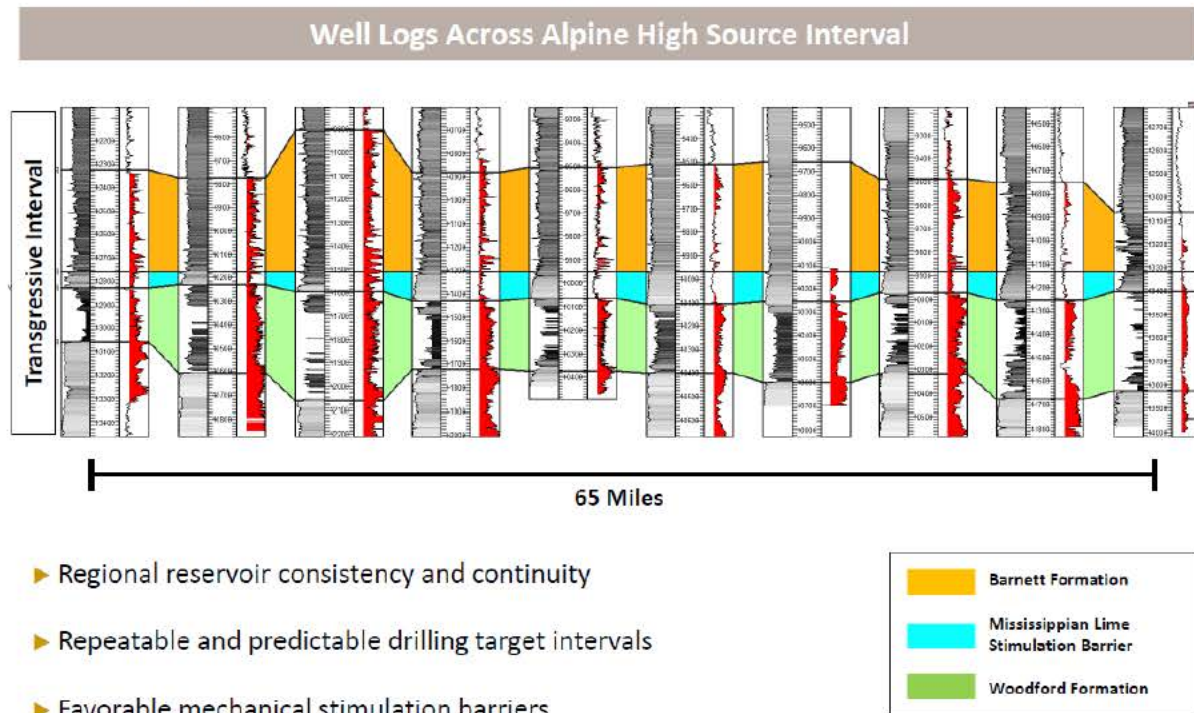
Source: APA's Sep'16 Conference Presentation

Figure 5: Good Rock Quality in Barnett

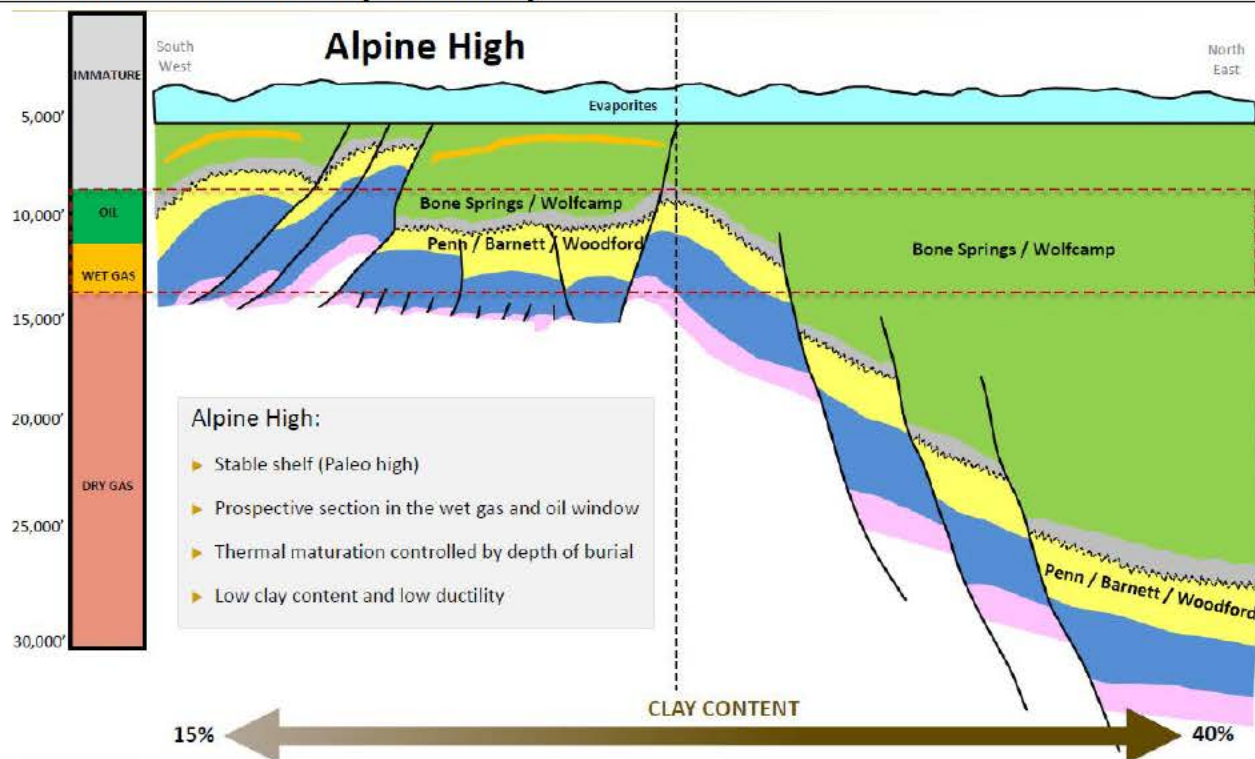
Source: APA's Sep'16 Conference Presentation

Figure 6: Clay Content is Dramatically Lower in APA's Acreage

Source: APA's Sep'16 Conference Presentation

Figure 7: Stacked Pay and Reservoir Consistency

Source: APA's Sep'16 Conference Presentation

Figure 8: There is A Wet Gas Play And Oil Play

Source: APA's Sep'16 Conference Presentation

We've addressed the main issues on the front page.

There are a bunch of obvious modelling questions which it would make sense to answer:

■ What is the Alpine High and what makes it different from other plays in the Permian?

"If I go back in Woodford time and reconstruct, much like the Arkoma Woodford, the SCOOP/STACK, the Alpine High was -- it was very much a similar situation. The difference here was it sat on a Paleo high. It was on a shelf, which enabled it to have less clay content as you moved into the deeper portion of the Basin. What actually happened was, in Permian time, the Delaware subsided away from the Alpine High. Many believed it was always down low and lifted up because there was a lot of movement post-Permian time."

"But, if you go to the center portion of this and you see from 9,000 feet to 13,000 feet, you're in the oil and wet gas window. The Woodford, Barnett, Penn, Wolfcamp and Bone Springs were always in that prime window. They were never deep and buried like what you have as you move more from the Southwest to the Northeast. And everything (ph) is the clay content. Your clay content is fantastic here. You're in the 10% to 20% range. This is a world-class resource."

"Another thing (ph) to have world-class resource and to have a big play is you have to have continuity and running room. This is a 65-mile cross section showing the Woodford, a Mississippi-aligned barrier which is a really strong hydraulic fracture barrier. And then, the Barnett, and what you see is -- and a lot of these are very old logs -- 65 miles you've got reservoir consistency, continuity, which is going to lead to very repeatable and predictable drilling results and targets. So, we're very excited about this play."

"I've said it's world-class. This would compare it versus three -- what other people would view as world-class resources, the Woodford Scoop, the Marcellus, and the Eagle Ford. TOC is strong. It stacks out as well as anything. Look at the clay content, 10% to 20%. Look at the porosity, 8% to 12%. What jumps out at you, though, is the thickness, 550 to 1,100 feet just in the Woodford and the Barnett. You add the Pennsylvanian to this, which we also believe is a source rock; you've got another 500 feet. So, you could have up to 1,600 feet of true source rock, which then makes us tower over some of these other plays. It's in a perfect window, 10,000 to 13,000 feet. It is world-class."

■ What are the 2000-3000 locations based on? What about additional zones?

"If we take just one landing zone on a high graded portion of this acreage, we have 2,000 to 3,000 plus, and this is one in the Woodford and one in the Barnett. When you see the thickness of this, you're going to realize we probably could put three landing zones in each easily. But, just one will give you 2,000 to 3,000-plus locations, very, very low cost. What's going to make this play really stand out is the quality, the thickness, and the cost structure, very, very highly economic wet gas play."

"And there is material upside both in the Woodford and the Barnett for more landing zones, as well as the Penn, the Wolfcamp, and the Bone Springs. This really is a giant onion that is going to take us years and years to peel back and uncover. The Woodford and Barnett alone can support a six-rig program for over 20 years. We've currently drilled 19 wells. We have nine on production that I'm going to get into some of those results in a minute, as well."

■ What are the current oil, gas and NGL infrastructure capacity in the region and what are the timelines on new capacity and the phasing of capital costs?

"We're going to raise our capital guidance this year to \$2 billion. If you look at our program this year now, 25% of it will be going to Alpine [\$500m], the Alpine High. 40% of that number's on infrastructure [\$200m]."

"by the middle of next year, we'll have our in-field processing and gathering in, and now we can finally start talking about and scoping what we will do from a midstream perspective, which we're very excited about. The nice thing about this is we'll be able to tie back to Waha. Clearly there's a need for gas in Mexico. We're going to be at the front of the line with a tremendous resource. So, we're very excited. We are selling the oil, NGLs. We're getting premium prices for both, and we project that we're going to be able to bring on the wells and start selling the gas in the second half of 2017."

■ What differentials do you expect to see for oil, NGL, gas?

We note APA stated the Spanish Trail well is 57 degree API and receiving 100% of WTI.

"Talk about the oil. I just showed you the Woodford. The Barnett looks just like it. If you look at this, what will jump out at you is the C7 -- the C17 makeup of this oil. There's no paraffin, there's no H2S, really with simple breakdown, it breaks down into 92% refined gasoline and diesel. 58% gasoline, 20% jet fuel and kerosene, and 14% diesel, and then 8% vacuum gasoline oil. It is a very special oil, and there's a lot of it. Nav (ph) and the guys put a little video together that we showed to the Board, where they had a weed eater, took this oil out, poured it in, fired it up, no smoke, nothing, ran just off of the oil. So, it'll give you an idea of how quality it is."

■ Do you have rights over the entire vertical column?

Yes.

■ What are your HBP requirements?

Four to five rigs, 60 to 80 wells a year, will hold the entire Alpine High position. We note that 96% of APA's Permian acreage is HBP excluding Alpine High.

■ What do you expect the LOE and G&T costs to be?

Lower than the Delaware as there is less water produced.

■ What is the variability of the oil and gas cuts across the play?

The play has been mapped and will be variable but for known reasons.

■ What is the potential of the Bone Spring and Wolfcamp across the play? When will you be testing that?

The initial results were already surprising.

"I'll talk about the Bone Springs first, the Mont Blanc 2H. This is the only well, quite frankly. I kind of broke up the pattern and made them drill this well. But, the Mont Blanc 2H, it's a 4,100 foot lateral. It's in the third Bone Springs, 43 degree API gravity, 854 barrels oil, and 1.5 million, going to be very, very prolific. Additionally, from a vertical well we're drilling, the Redwood, the Wolfcamp, this well while drilling flowed on us for over five days. We finally decided we ought to get some testing facilities out there. This thing was flat. This is not unstimulated, just a vertical section in the Wolfcamp, 700 barrels of oil a day, flat for over 10 days, 4.5 million cubic feet of gas, 45 degree API, 1,300 BTU. The Wolfcamp and the Bone Springs may be significantly more economic than even the Woodford and the Barnett that I've shown you. We're just not at a point, quite frankly, where we've had time to even start to delineate and test these."

As news comes out, there will be oil upside.

■ What are the clay cuts across the play?

10-20% clay content range. See Figure 8. A low clay content is part of the key, together with porosity to making this so productive.

■ Where would you look to divest assets now that the core Midland and Alpine High, plus the Delaware allow a robust drilling inventory?

"We're going to continue to actively manage our portfolio. As this rolls forward over the next couple of years, it's going to give us the opportunity to continually assess our portfolio."

■ How big is the oil potential in the North of Reeves?

The type curve for the Woodford / Barnett already has oil and NGL plus strong rates at low costs to drive good economics. Drilling deepest section to HBP but there will be oil rich wells in the play.

Companies Mentioned (Price as of 08-Sep-2016)**Apache Corp.** (APA.N, \$58.99, NEUTRAL, TP \$67.0)

Disclosure Appendix

Important Global Disclosures

I, Edward Westlake, certify that (1) the views expressed in this report accurately reflect my personal views about all of the subject companies and securities and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

3-Year Price and Rating History for Apache Corp. (APA.N)

APA.N	Closing Price	Target Price	
Date	(US\$)	(US\$)	Rating
16-Sep-13	87.00	104.00	O
17-Oct-13	90.57	105.00	
24-Jan-14	82.42	104.00	
11-Feb-14	81.38	102.00	N
24-Apr-14	87.96	99.00	
17-Jul-14	98.91	100.00	
15-Oct-14	72.67	96.00	
02-Dec-14	63.11	73.00	
15-Dec-14	55.20	69.00	
23-Jan-15	62.88	65.00	
17-Apr-15	70.38	70.00	
22-Jul-15	47.32	58.00	*
07-Aug-15	46.11	62.00	
08-Sep-15	43.24	48.00	
22-Oct-15	45.97	47.00	
12-Nov-15	48.90	56.00	
17-Nov-15	49.71	57.00	
09-Dec-15	44.95	59.00	
26-Jan-16	38.03	41.00	
01-Mar-16	38.62	46.00	
20-Apr-16	54.68	55.00	
06-May-16	53.84	60.00	
20-May-16	57.11	59.00	
13-Jul-16	56.54	64.00	
01-Sep-16	49.79	63.00	
07-Sep-16	55.13	67.00	



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Valuation Methodology and Risks: (12 months) for Apache Corp. (APA.N)

Method: Our 12-month target price of \$67 per share for Apache Corp. assumes the stock trades at parity with our net asset value. Our NEUTRAL rating is a function of total shareholder return over the next twelve months and the relative risk/reward versus our coverage universe.

Risk: We see several risks to APA achieving our \$67 TP and our Neutral rating. APA has nearly 15% of its production coming from Egypt, which is going through a revolution. Political, social and economic conditions in the country could significantly worsen, and may lead to a reduction in the company's production, profits and stock price. In general, oil and gas companies are subject to changes in global commodity supply/demand, as well as geopolitical related issues that could adversely affect the company's ability to achieve our TP and could potentially lower our Rating.

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8 September 2016

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